

## First photographic evidence of Asian Small-clawed Otter from Udanti Sitanadi Tiger Reserve

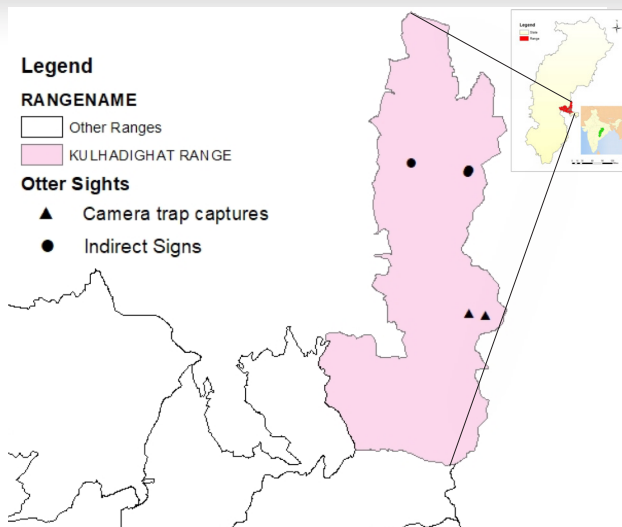


Photo captures of Asian Small-clawed Otter.

Otters belong to the mammalian order Carnivora and family Mustelidae. There are 13 species of otters distributed worldwide (Corbet & Hill 1980) and in India there are only three species of otter: Eurasian Otter *Lutra lutra* (Linnaeus, 1758), Smooth-coated Otter *Lutrogale perspicillata* (I. Geoffroy Saint-Hilaire, 1826), and Asian Small-clawed Otter *Aonyx cinereus* (Illiger, 1815) (Menon 2014). But none of them have been ever reported from Chhattisgarh. Asian Small-clawed Otter is the smallest of the three species and is till date known from northern, southern, and eastern most parts of India (Hussain et al. 2011) and recently reported from Karlapat Wildlife Sanctuary and Kotagarh Wildlife Sanctuary, Odisha (Mohapatra et al. 2014), which are near to the study area. This

species inhabits perennial hilly streams of the riparian systems with big boulders and with or without a wide river bank (Mohapatra et al. 2014). Asian or Oriental Small-clawed Otter is classified as Vulnerable as per IUCN Red List, protected under Schedule I of Wildlife (Protection) Act, 1972, and in Appendix I of Convention on International Trade in Endangered Species (CITES). Being an apex predator, otters play an important role in maintaining nutrition cycle between aquatic and terrestrial eco systems (Ben-David et al. 1998).

Chhattisgarh was carved out of Madhya Pradesh in 2000 and is a tribal-dominated land with wild-spaces shared among both humans and wildlife. Increasing human



### Otter sightings in Udanti Sitanadi Tiger Reserve during study.

population, degradation of forest land, forest fires, and hunting activities spared a narrow domain for the wildlife to live and thrive. Due to political unrest, the rich biodiversity was highly unexplored for many years. Multiple species are losing their existence or may also go locally extinct and unnoticed.

Udanti Sitanadi Tiger Reserve (USTR) was commissioned in 2009 (Gazette notification No. F8-43/2007/10-2, 20 February 2009) while including Sitanadi Sanctuary (Gazette notification No./5093-3725/X/2/74, 1 November 1974) and Udanti Sanctuary (Gazette notification No./15/4/83/10/2, 9 March 1984) as critical core areas, along with Kulhadighat range, Indagaon range and Tourenga range as buffer zone. It is situated between 20.526 to 19.935 latitude and 81.798 to 82.438 longitude. Kulhadighat range is the only plateau region of the tiger reserve that ranges from 540 to 890 m. It has mixed forests, while the plains bear predominant sal forest patches and sparse

bamboo plots. The water sources in the region are perennial with less biotic pressure.

Camera trapping was conducted in the Udanti Sitanadi Tiger Reserve during All India Tiger Estimation in 2018 and camera traps were deployed across the tiger reserve. We already had anecdotal records of otter presence in the area. During camera trapping session while camera traps deployed for tigers, co-predators and their prey base, some of the camera traps were deployed in the sites used by otters. The camera traps were deployed in the field for the duration of 30 days and, got six different photographic evidence of Asian Small-clawed Otter in two different camera trap units separated by 1,000m from each other. Cuddeback professional series camera traps were used and deployed for camera trapping.

To record observations related to sighting locations, we used Garmin etrex 10 model and QGIS 2.18.26 for the preparation of maps. Another set of evidences were collected 10km away region where holts, spraints, and tracks were identified across 1-km stretch of shallow river. While interviewing the locals, it was found that the



Photo capture from another location of Asian Small-clawed Otter.



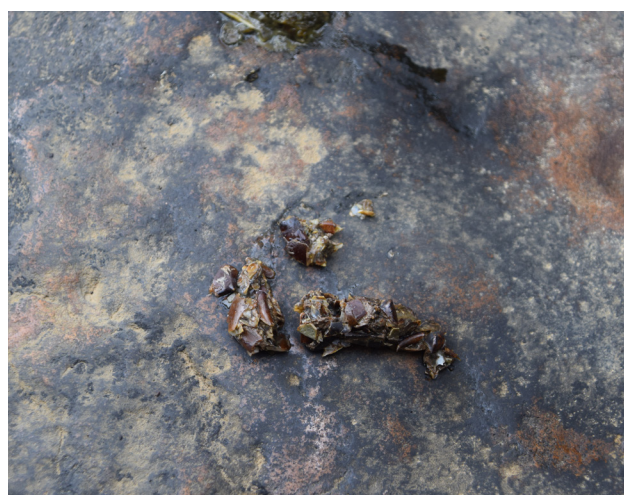
**Asian Small-clawed Otter tracks measured with the help of scale.**

creature called by local vernacular name “Pânisuna”, is wide spread across rivers and streams across the Kulhadighat range. As per the locals, pretty often they found their fish-nets being torn by the otters. In other areas of the Kulhadighat range, with the help of locals, nesting sight of these otters were identified from spraints with lots of crab waste that justified it to be Asian Small-clawed Otter (Sivasothi 1994). Based on sign survey, camera traps were deployed and successful photographic captures were recorded. Species confirmation was done with the help of available standard literature of Prater (1971) and Menon (2014).

As per the discussions with local forest villagers and tribal communities, identifying signs on trails across river streams from Kukrar beat and a total of six photo captures from Dadaipani beat of Kulhadighat range of USTR during camera trapping session suggests its distribution across the Kulhadighat range of the tiger reserve (Table 1). This is perhaps the first report of the distribution of otter in Chhattisgarh.

From Odisha, the species was identified and reported from Mahanadi River basin (Mohapatra et al. 2014), and again Mahanadi River basin of Chhattisgarh region where the evidence of the species is being reported. This supports the fact that Asian Small-clawed Otter may be widely distributed across Mahanadi basin and needs to be further assessed. The scat samples observed during trails contained 80% to 90% undigested exoskeleton crab-waste and the length of its claw marks measured to be 43mm.

USTR is an important part of a tiger conservation landscape and it provides valuable corridor connectivity between Barnawapara Wildlife Sanctuary, Chhattisgarh in the north-east, Sunabeda Wildlife Sanctuary, Odisha in the east, and to Indravati Tiger Reserve, Chhattisgarh in the south. Fortunately, a small number of new species have even reported earlier from the USTR, Indian Mouse Deer (Basak et al. 2017) and Rusty-spotted Cat (Basak et al. 2018). Now the first photographic evidence



**Spraints found across river trails in the area of otters.**

of Asian Small-clawed Otter signifies its prime importance and raises need of conservation efforts for the small mammalian fauna along with conservation of charismatic tiger, co-predators, and their prey species. Discovering new distributions across the landscape helps in strengthening the scientific understanding of the species and its habitat. This article shall also help other workers and policy maker in undertaking comprehensive steps for long term in situ conservation of this species in Chhattisgarh. This opens a broad dimension in studying the ecology and status of Asian Small-clawed Otter in this pristine landscape central India.

Of the total 1,842km<sup>2</sup> of the tiger reserve, the population of Asian Small-clawed Otter was confined to only Kulhadighat range. As discussed with the forest villagers there are no direct threats from the locals to these

animals, but fragmentation of habitat and deforestation are some of the issues that may deteriorate their present population. Many times while locals lay fish-nets across



**Habitat preferred by Asian Small-clawed Otter in Udanti Sitanadi Tiger Reserve, Gariyaband.**

**Table 1. Description of direct and indirect signs of Asian Small-clawed Otter found from study area.**

Location	Coordinates	Habitat descriptions	Remarks
Dadaipani beat, Kulhadighat range	20.291 N 82.407 E	Stream having depth 1-1.5 m with sandy substrate and medium to small rock boulders.	Photo capture through camera traps and tracks.
Dadaipani beat, Kulhadighat range	20.289 N 82.421 E	Same as Above.	Photo capture through camera traps.
Kukrar beat, Kulhadighat range	20.402 N 82.406 E	Stream having depth above 2 m with large to medium rock boulders and sandy substrate.	Tracks recorded.
Kukrar beat, Kulhadighat range	20.402 N 82.406 E	Same As Above.	Tracks and old spraints recorded.
Kukrar beat, Kulhadighat range	20.404 N 82.407 E	Same As Above.	Here holts were identified where scores of tracks and spraints were recorded across 100 m stretch over bank of river.
Ondh beat, Kulhadighat range	20.410 N 82.359 E	Stream with rock boulders and sandy substrate.	Tracks.

river streams, these otters use to bite and tear their nets. But it was clear that in response, no retaliation was raised by the locals. Similarly, the same site was being used by locals as well as these otters. During summers, the forest fires are another important matter of concern for the otters as well as their habitat. Further studies are solicited on complete status, distribution and threat assessments of this species in the Tiger Reserve and as well as in the state. Conservation of Asian Small-clawed Otter in such a challenging landscape needs skillful and arduous scientific studies along with conservation actions and awareness.

### References

- Basak, K., M. Ahmed, M. Suraj, C. Sinha, B.V. Reddy, O.P. Yadav & K. Mondal (2017).** Confirming presence of Indian mouse deer from Chhattisgarh, Central India with photographic evidence after 112 years. *International Journal of Fauna and Biological Sciences*, 4(4): 192-195. [https://www.researchgate.net/publication/319236757\\_Confirming\\_presence\\_of\\_Indian\\_mouse\\_deer\\_from\\_Chhattisgarh\\_Central\\_India\\_with\\_photographic\\_evidence\\_after\\_112\\_years](https://www.researchgate.net/publication/319236757_Confirming_presence_of_Indian_mouse_deer_from_Chhattisgarh_Central_India_with_photographic_evidence_after_112_years)
- Basak, K., M. Ahmed, M. Suraj, C. Sinha, B.V. Reddy, O.P. Yadav & K. Mondal (2018).** First picture and temporal activity of Rusty-spotted Cat from Chhattisgarh, Central India. *CATnews*, 67: 27-29. <http://www.catsg.org/catnews/index.php?id=705>
- Ben-David, M., R.T. Bowyer, L.K. Duffy, D.D. Roby & D.M. Schell (1998).** Social behavior and ecosystem processes: river otter latrines and nutrient dynamics of terrestrial vegetation. *Ecology*, 79: 2567-2571.
- Corbet, G.B. & J.E. Hill J.E. (1980).** *A world list of mammalian species*. British Museum and Cornell University Press.
- Gyeltshen, J. & C. Dorji (2015).** Sighting of Asian Small-clawed Otter: A new small mammal record from Thrumshingla National Park; *Small Mammal Mail* - Bi-Annual Newsletter of CCINSA & RISCINSA 7(1): 20-22.
- Hon, N., N. Phearoom, K. Vengsong & C. Vichet (2010).** Food And Habitat Of Asian Small-clawed Otters In Northeastern Cambodia: IUCN/SCC Otter Specialist Group Bulletin, 27(1): 12-23. [https://www.researchgate.net/publication/42107557\\_Food\\_And\\_Habitat\\_Of\\_Asian\\_Small-Clawed\\_Otters\\_In\\_Northeastern\\_Cambodia](https://www.researchgate.net/publication/42107557_Food_And_Habitat_Of_Asian_Small-Clawed_Otters_In_Northeastern_Cambodia)
- Hussain, S.A., S.K. Gupta, P.K. Silva d (2011).** Biology and Ecology of Asian Small-clawed Otter *Aonyx cinereus* (Illiger, 1815): A review; IUCN Otter Spec. Group Bull. 28(2): 63-74.
- Mohapatra, P.P., H.S. Patel & S.A. Hussain (2014).** Occurrence of Asian Small-clawed Otter *Aonyx cinereus* (Illiger, 1815) in Eastern Indian. *Current Science*, 107(3): 367. <https://www.researchgate.net/publication/263366590>
- Prakash, N., D. Mudappa, T.R.S. Raman & A. Kumar (2012).** Conservation of the Asian Small-clawed Otter (*Aonyx Cinereus*) in Human-Modified Landscapes, Western Ghats, India. *Tropical Conservation Science*, 5(1): 67-78. <https://www.researchgate.net/publication/258699777>
- Sivasothi, N. (1994).** A review of otters in Malaysia and Singapore. *Hydrobiologia* 285: 151-170. <https://www.researchgate.net/publication/226229323>

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